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ABSTRACT

This guide is intended to assist vocational educators teaching a course in cosmetology to relate the skills addressed in science courses to a particular vocational education course. The guide consists of a curriculum alignment chart that cross-references vocational performance indicators to science skills/competencies. The science competency indicators presented for each vocational education performance indicator are broken down according to science course and grade level. Selected teacher helps in the form of suggested references are included for most of the performance indicators listed in the curriculum alignment chart, and student behavior checklists are included for some of the performance indicators. (MN)

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CURRICULUM ALIGNMENT CHART

VOCATIONAL EDUCATION COURSE Cosmetology

VOCATIONAL EDUCATION PERFORMANCE INDICATOR	VOCATIONAL EDUCATIONAL COMPETENCY SCIENCE SKILL/CONCEPT	RELEVANT SCIENCE COMPETENCY INDICATORS
INDICATORS 001 01. Read written instructions and/or specifications accurately. 02. Complete tasks as directed.	001 Follow oral or written instructions for performing job tasks. SKILLS: Suggest - scientific method Demonstrate	ELEMENTARY SCIENCE Grades 4-6 (Introduction to Science) 1.01 Suggest ways of finding a solution(s) of a given science problems by using a scientific method PHYSICAL SCIENCE Grades 8-12 (Introduction to Physical Science) 3.02 Demonstrate the ability to apply a scientific method in solving an experimental problem

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VOCATIONAL EDUCATION COURSE Cosmetology

001 Determine final score for each student tested and record it as the students' proficiency rating.

REFER TO REFERENCES: Kibbe, Constance V. Standard textbook of Cosmetology. Bronx, NY: Milady Publishing Corp., 1981

Professional Cosmetology Practices, Oklahoma (PCP) PCP 11A

Behavior Checklist

- Student listens when instructions are given orally.
- Student asks for clarification /explanation.

CURRICULUM ALIGNMENT CHART

VOCATIONAL EDUCATION COURSE Cosmetology

VOCATIONAL EDUCATION PERFORMANCE INDICATOR	VOCATIONAL EDUCATIONAL COMPETENCY SCIENCE SKILL/CONCEPT	RELEVANT SCIENCE COMPETENCY INDICATORS
INDICATORS 002 01. Handle materials, tools and equipment in a responsible manner. 02. Maintain work area in an acceptable manner. 03. Maintain appropriate personal hygiene and appearance. 04. Perform work of consistently "good" quality.	002 Demonstrate acceptable work habits and behavior. SKILLS: Demonstrate - lab instruments Show - enthusiasm Display - enthusiasm Discriminate - health safety	ELEMENTARY SCIENCE/MANIPULATIVE SKILLS Grades K-12 1.01 Demonstrate the proper use of a laboratory instrument appropriate for the student's grade level or course 2.01 Demonstrate proper care of laboratory instruments when using and storing them ELEMENTARY SCIENCE Grades 4-6 (Living Things) 6.01 Discriminate between good and bad health practices PHYSICAL SCIENCE/ATTITUDES Grades 7-12 4.02 Show enthusiasm and interest when put into laboratory situations 4.03 Display enthusiasm for solving problems using experimental methods

VOCATIONAL EDUCATION COURSE Cosmetology

002
- Willing to learn all aspects of the job in order to perform at a high standard.
- Adheres to schedule closely (not absent and arrives on time, and takes only allowable time for lunch and brakes)
- Willing to follow directions in performing job tasks.
- Willing to offer suggestions for improving quality of work.
- Accepts and gives constructive critism with consideration for the feelings of others.
- Shows readiness and willingness to help others and displays a pleasing personality.
- Shows awareness of and sensitivity to interactions in working environment; enhances and/or contributes to improvement.
- Selects appropriate tools, equipment and materials for being performed.
- Uses tools, equipment and materials in manner prescribed for performing task and follows procedures for general maintenance.
- Conserves supplies and/or materials and returns all equipment, S/&M to appropriate place when not in use.
- Follows safety precautions given for usage and storage of above tools M/&E and notifies appropriate person in the event of malfunctions.

Student Behavior Checklist
- Performs routine tasks without supervision.
- Shows aggressiveness and initiative with self-confidentence and can be relied upon.
- Continues a program of self-improvement--personal and professional, yet will still ask for explanation and clarity of instructions when needed.

CURRICULUM ALIGNMENT CHART

VOCATIONAL EDUCATION COURSE Cosmetology

VOCATIONAL EDUCATION PERFORMANCE INDICATOR	VOCATIONAL EDUCATIONAL COMPETENCY SCIENCE SKILL/CONCEPT	RELEVANT SCIENCE COMPETENCY INDICATORS
INDICATORS 003 01. Follow prescribed safety procedures in performing job tasks.	003 Demonstrate a positive attitude towards safety. SKILLS: Demonstrate - lab instruments Discriminate - health safety	ELEMENTARY SCIENCE/MANIPULATIVE SKILLS Grades K-12 1.01 Demonstrate the proper use of a laboratory instument appropriate for the student's grade level or course 2.01 Demonstrate proper care of laboratory instruments when using and storing them ELEMENTARY SCIENCE Grades 4-6 (Living Things) 6.01 Discriminate between good and bad health practices

SELECTED TEACHER HELPS

VOCATIONAL EDUCATION COURSE Cosmetology

003

- Does not leave tools and other materials where others could trip or fall.
- Uses correct solvents for cleaning
- Observes safety practices and does not use equipment without permission.
- Keeps all chemical containers clearly labeled, always wears safety equipment when appropriate and asks about correct procedures for tool or machine operation if not certain.
- Always watches out for the safety of fellow students.
- Teacher should insert major safety procedures prescribed for student in your class

CURRICULUM ALIGNMENT CHART

VOCATIONAL EDUCATION COURSE Cosmetology

VOCATIONAL EDUCATION PERFORMANCE INDICATOR	VOCATIONAL EDUCATIONAL COMPETENCY SCIENCE SKILL/CONCEPT	RELEVANT SCIENCE COMPETENCY INDICATORS
INDICATORS 006 01. Document time and describe procedures for record keeping.	006 Identify state laws, history, rules and regulations relating to the cosmetology profession. SKILLS: Record - data chart	LIFE SCIENCE/PROCESS SKILLS Grades 7-9 4.01 Record observed information from science experiences in simple, clear tabular form

SELECTED TEACHER HELPS

VOCATIONAL EDUCATION COURSE Cosmetology

006 REFER TO REFERENCE: NC Cosmetic Art Law Pamphlets of Rules and Regulations

TEACHER REFER TO: An Act to Regulate the Practice of Cosmetic Art in the State of NC issued by the State Board of Cosmetic Art Examiners of NC and Curriculum and Rules for Recognized Schools and Colleges of Beauty Culture.

CURRICULUM ALIGNMENT CHART

VOCATIONAL EDUCATION COURSE Cosmetology

VOCATIONAL EDUCATION PERFORMANCE INDICATOR	VOCATIONAL EDUCATIONAL COMPETENCY SCIENCE SKILL/CONCEPT	RELEVANT SCIENCE COMPETENCY INDICATORS
INDICATORS 007 01. Demonstrate the ability to safely use chemicals. 02. Identify chemicals used in laboratory situations.	007 Demonstrate lab safety procedures. SKILLS: Discriminate - health safety	ELEMENTARY SCIENCE/MANIPULATIVE SKILLS Grades K-12 1.01 Demonstrate the proper use of a laboratroy instument appropriate for the student's grade level or course 2.01 Demonstrate proper care of laboratory instruments when using and storing them ELEMENTARY SCIENCE Grades 4-6 6.01 Discriminate between good and bad health practices

VOCATIONAL EDUCATION COURSE Cosmetology

007 REFER TO REFERENCE: Williams, William A., ed.
Accident Prevention Manual for Shop Teachers
Chicago: American Technical Society. 1963
Safety Unit II, Section A, Pages 17A-58A

PCP: Section A - Page 37A-38A-39A Assignment Sheet #2
PCP: Section A - Page 41A-42A Assignment Sheet #3-Item 1-11
PCP: Section A - Page 39A Electrical Installation-Items 1-7

CURRICULUM ALIGNMENT CHART

VOCATIONAL EDUCATION COURSE Cosmetology

VOCATIONAL EDUCATION PERFORMANCE INDICATOR	VOCATIONAL EDUCATIONAL COMPETENCY SCIENCE SKILL/CONCEPT	RELEVANT SCIENCE COMPETENCY INDICATORS
INDICATORS 008 01. Maintain work area in an acceptable manner. 02. Maintain appropriate personal hygiene and appearance. 03. Follow prescribed procedures. 04. Demonstrate knowledge of good health practices.	008 Demonstrate sterilization, sanitation, bacteriology and first aide processes. SKILLS: Descriminate - health safety Describe - disease organisms humans Explain - viruses bacteria Identify - diseases Classify Label	ELEMENTARY SCIENCE Grades 4-6 (Living Things) 6.01 Discriminate between good and bad health practices 6.02 Describe how disease-causing organisms enter the body such as entry through water, food, air, and skin BIOLOGY Grades 10-12 (Microbiology) 1.01 Label the major components of a virus and explain how the compone function 1.02 Classify different types of bacteria by shape 1.03 Identify from a list of familiar diseases those caused by viruses or bacteria 1.04 Explain several ways viruses and bacteria are used in industry and research

SELECTED TEACHER HELPS

VOCATIONAL EDUCATION COURSE Cosmetology

008 REFER TO REFERENCES: Kibbe, Constance V. Standard Textbook of Cosmetology
Bronx, NY: Milady Publishing Corp., 1981

Dalton, John W. The Professional Cosmetologist
St. Paul, Minn: West Publishing Co., 1976

Barrett, Dean. The Van Dean Manual: Professional Techniques for Cosmetologist
Rev. Ed. Bronx, NY: Milady Publishing Corp., 1974

PCP: Pages 19A-58A

CURRICULUM ALIGNMENT CHART

VOCATIONAL EDUCATION COURSE Cosmetology

VOCATIONAL EDUCATION PERFORMANCE INDICATOR	VOCATIONAL EDUCATIONAL COMPETENCY SCIENCE SKILL/CONCEPT	RELEVANT SCIENCE COMPETENCY INDICATORS
INDICATORS 011 01. Demonstrate proper skills for prescribing shampoos. 02. Demonstrate proper skills for prescribing treatment of hair and scalp disorders.	011 Analyze condition of scalp and hair. SKILLS: Identify - cells parts functions drugs acids bases salts List - drugs alcohol narcotics tobacco Diagram - cells Discuss - diseases Plan - experiments scientific method Measure - mass precision Write - scientific notation symbols elements formulas compounds	BIOLOGY Grades 10-12 (The Nature of Life) 4.01 Identify the basic unit (cell) of which living things are composed 4.02 List common structures found in all cells 4.03 Explain that cells vary in size, structure, and function (Biology of Humans) 3.03 Discuss the effects of diseases (nutritional, pathogenic, genetic) upon the physiology of the human body CHEMISTRY Grades 10-12 (Measuring and Computing) 1.02 Measure liquid volumes, within the precision of each container, using flasks, cylinders, and beakers 1.04 Choose appropriate units for measuring area, length, volume, mass, weight, temperature, heat, and time (Chemical Reactions) 3.01 Demonstrate and explain the effect that changes in temperature, concentration, and pressure have on the extent and direction of a chemical reaction (Acids, Bases, and Salts) 2.01 Write a chemical formula for each of a variety of simple acids, bases, and salts 3.01 Determine experimentally the pH, the effect on litmus paper, and other physical characteristics of acids, bases, and salts

VOCATIONAL EDUCATION COURSE Cosmetology

PCP: Section B Unit I

PAGES: 1B-24B
27B-36B
55B
83B-87B

PCP: Unit II Section B
Pages 59-61, Job Sheet #1
Pages 63-65, Job Sheet #2
Pages 67-72, Job Sheet #3

CURRICULUM ALIGNMENT CHART

VOCATIONAL EDUCATION COURSE Cosmetology

VOCATIONAL EDUCATION PERFORMANCE INDICATOR	VOCATIONAL EDUCATIONAL COMPETENCY SCIENCE SKILL/CONCEPT	RELEVANT SCIENCE COMPETENCY INDICATORS
INDICATORS 012 01. Demonstrate the ability to perform scalp manipulation. 02. Demonstrate the ability to brush for scalp treatment.	012 Demonstrate scientific brushing. SKILLS: Identify - objects Classify - objects Describe - motion State - definitions Demonstrate - friction static electricity	ELEMENTARY SCIENCE Grades 4-6 (Matter and Energy) 3.01 Describe properties such as color, shape, weight, and texture of given objects 30.04 Demonstrate the production of static electricity when given a comb and bits of paper CHEMISTRY/PROCESS SKILLS Grades 10-12 1.01 Identify the similarities and/or differences, using the senses, among a collection of objects or concepts 2.01 Classify a group of objects or concepts according to their various properties 7.01 Describe spatial relationships and their change with time (shapes, direction, spatial arrangements, motion and speed, symmetry, and rate of change) when confronted with situations involving position of objects

VOCATIONAL EDUCATION COURSE Cosmetology

012 PCP: Section B Unit I

PAGES: 1B-24B
27B-36B
55B
83B-87B

PCP: Unit II Section B
Pages 59-61, Job Sheet #1
Pages 63-65, Job Sheet #2
Pages 67-72, Job Sheet #3

CURRICULUM ALIGNMENT CHART

VOCATIONAL EDUCATION COURSE Cosmetology

VOCATIONAL EDUCATION PERFORMANCE INDICATOR	VOCATIONAL EDUCATIONAL COMPETENCY SCIENCE SKILL/CONCEPT	RELEVANT SCIENCE COMPETENCY INDICATORS
INDICATORS 014 01. Demonstrate knowledge of hair rinses and conditioners. 02. Choose appropriate rinses and conditioners. 03. Demonstrate proper care of hair.	014 Demonstrate skills for application of hair rinses and conditioners. SKILLS: Demonstrate - laboratory instruments Identify Explain Measure List	ELEMENTARY SCIENCE/MANIPULATIVE SKILLS Grades K-12 1.01 Demonstrate the proper use of a laboratory instrument appropriate for the student's grade level or course BIOLOGY Grades 10-12 (The Nature of Life) 4.01 Identify the basic unit (cell) of which living things are composed 4.02 List common structures found in all cells 4.03 Explain that cells vary in size, structure, and function 1.02 Measure liquid volumes, within the precision of each container, using flasks, cylinders, and beakers 1.04 Choose appropriate units for measuring area, length, volume, mass, weight, temperature, heat and time (Chemical Reactions) 3.01 Demonstrate and explain the effect that changes in temperature, concentration, and pressure have on the extent and direction of a chemical reaction (Acids, Bases, and Salts) 2.01 Write a chemical formula for each of a variety of simple acids, bases, and salts 2.02 Identify the formulas of simple acids, bases, and salts, each by name 3.01 Determine experimentally the pH, the effect on litmus paper, and other physical characteristics

VOCATIONAL EDUCATION COURSE Cosmetology

014 REFER TO REFERENCES: PCP: Section B Unit I

Pages 1B-24B
Pages 27B-36B
Pages 55B
Pages 83B-87B

PCP: Section B Unit II
Pages 117-118 Job Sheet #4
Pages 120-121

CURRICULUM ALIGNMENT CHART

VOCATIONAL EDUCATION COURSE Cosmetology

VOCATIONAL EDUCATION PERFORMANCE INDICATOR	VOCATIONAL EDUCATIONAL COMPETENCY SCIENCE SKILL/CONCEPT	RELEVANT SCIENCE COMPETENCY INDICATORS
INDICATORS 015 01. Demonstrate fingerwaving/ molding and scaling or sectioning procedures. 02. Demonstrate different types of pincurls. 03. Demonstrate roller techniques showing volume and indentation. 04. Demonstrate a basic combout.	015 Demonstrate basic wet hairstyling techniques. SKILLS: Demonstrate - lab instruments Distinguish - crystalline/non Make - solution Record - time temperature Describe - spacial relationships	ELEMENTARY SCIENCE/MANIPULATIVE SKILLS Grades K-12 1.01 Demonstrate the proper use of a laboratroy instument appropriate for the student's grade level or course 2.01 Demonstrate proper care of laboratory instruments when using and storing them 3.01 Construct simple equipment, models, and exhibits using materials and supplies appropriate for the student's grade level or course ELEMENTARY SCIENCE Grades 4-6 (Matter and Energy) 5.01 Make and describe a solution from given ingredients (i.e., salt and water) 6.01 Distinguish between examples of crystalline and noncrystalline substances 21.01 Record the temperature of three or four different liquids, each being at a different temperature over a period of time, using a thermometer to see if temperature changes have occurred ELEMENTARY SCIENCE/PROCESS SKILLS Grades 4-6 7.01 Describe spatial relationships and their change with time (shapes, direction, spatial arrangements, motion and speed, symmetry, and rate of change) when confronted with situations involving positions of objects

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VOCATIONAL EDUCATION COURSE Cosmetology

015 REFER TO REFERENCES: PCP: Unit VI Section B
Pages 221-437

Kibbe, Constance V. Standard Textbook of Cosmetology
Bronx, NY: Milady Publishing Corp., 1981

Dalton, John W. The Professional Cosmetologist.
St. Paul, Minn.: West Publishing Co., 1976

Barret, Dean. The Van Dean Manual: Professional Techniques for Cosmetologist.
Rev. Ed., Bronx, NY: Milady Publishing Corp., 1974

Scott, Olive P. et al. The Prentice-Hall Textbook of Cosmetology: A Professional Guide to the Theory and Practice of Beauty Culture: Englewood Cliffs, NJ: Prentice Hall Inc., 1976

CPC: Section B - Unit 12
Pages 597-598

CPC: Section B - Unit 12
Pages 604-605

CPC: Section B - Unit 12
Pages 598-599

- Self, Lee Hair Styling El Paso Texas, N.D.
- Professional Mechanics of Comb-outs. PMHD Encyclopedia of Beauty
  Vol. 3 Chicago: PMHD Publishing Co., 1969
- Hays, Rufus V. Co-Ed-Co Continuing Education in Cosmetology
  5855 Beverly, Mission, Kansas 66202

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VOCATIONAL EDUCATION COURSE Cosmetology

VOCATIONAL EDUCATION PERFORMANCE INDICATOR	VOCATIONAL EDUCATIONAL COMPETENCY SCIENCE SKILL/CONCEPT	RELEVANT SCIENCE COMPETENCY INDICATORS
INDICATORS		
016 01. Demonstrate blow drying and thermal techniques. 02. Demonstrate dry hairstyling techniques.	016 Demonstrate proper pressing and thermal curling techniques. SKILLS: List - energy kinds/forms Distinguish - energy types Identify - conduction, convection, radiation, heat, work, temperature Describe - conduction, convection, radiation, heat, work, temperature Define - evaporation, condensation, energy, heat, vaporization	PHYSICAL SCIENCE Grades 8-12 (Mechanics) 4.01 Distinguish between potential and kinetic energy 4.02 List different kinds of energy such as chemical, heat, electrical, mechanical, etc., with examples of each (Heat) 1.01 Describe heat as a form of energy which can be harnessed to do useful work 1.02 Describe in writing the difference between heat and temperature 2.01 Define a calorie and use it in calculating simple heat problems 2.02 Determine the amount of heat involved when given a measured amount of warm water and a thermometer 3.01 Identify conduction, convection, or radiation when given a list containing examples of heat transfer 4.01 Define evaporation and condensation and indicate if energy is absorbed or given off for each process 4.02 Define heat of vaporization and heat of fusion 5.01 Determine the heat required to increase the temperature of an object by a given number of degrees when given the specific heat and mass of an object

SELECTED TEACHER HELPS

VOCATIONAL EDUCATION COURSE Cosmetology

016 REFER TO REFERENCE: CPC: Unit X
Page 439B-434B

. Kibbe, Constance V. Standard Textbook of Cosmetology
Bronx, NY: Milady Publishing Corp., 1981

. Dalton, John W. The Professional Cosmetologist
St. Paul, Minn: West Publishing Co., 1976

. Barrett, Dean. The Van Dean Manual: Professional Techniques for Cosmetologist
Rev. Ed., Bronx, NY: Milady Publishing Corp., 1974

. Scott, Olive P. et AL. The Prentice-Hall Textbook of Cosmetology: A Professional Guide to the Theory and Practice of Beauty Culture. Englewood Cliffs, NJ: Prentice-Hall Inc., 1976

CPC: Section B - Unit II
Page 495
CPC: Section B - Unit II
Page 499-502
CPC: Section B - Unit II
Page 511

. Morrow, Willis L. Curly Hair
United States of America, Black Publishers of San Diego, 1973

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VOCATIONAL EDUCATION COURSE Cosmetology

VOCATIONAL EDUCATION PERFORMANCE INDICATOR	VOCATIONAL EDUCATIONAL COMPETENCY SCIENCE SKILL/CONCEPT	RELEVANT SCIENCE COMPETENCY INDICATORS
INDICATORS 017 01. Identify facial shapes and facial profiles. 02. Demonstrate hairstyling skills various for various body structure and face shapes.	017 Identify body structure. SKILLS: List - human body organs drugs alcohol narcotics tabacco Explain - human body organs Label - organs Discuss - diseases Defend - origin Identify - body parts human body systems Distinguish - chemical change physical change Describe - spacial relationship Infer - results Demonstrate - laboratory instruments Construct - models	ELEMENTARY SCIENCE Grades 4-6 (Living Things) 2.01 Identify the function of major body parts BIOLOGY Grades 10-12 (The Nature of Life) 4.04 Diagram cells observed in the laboratory (i.e., cheek, onion, elodea) (Biology of Humans) 2.01 Label and describe the major organs of each major system of the human body 4.02 List the consequences of the use of alcohol, narcotics, and tobacco

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017 REFER TO REFERENCES: PCP: Unit IV
Pages 125B-175B

CPC: Pages 159-162

CPC: Page 163

CPC: Page 168

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VOCATIONAL EDUCATION COURSE Cosmetology

VOCATIONAL EDUCATION PERFORMANCE INDICATOR	VOCATIONAL EDUCATIONAL COMPETENCY SCIENCE SKILL/CONCEPT	RELEVANT SCIENCE COMPETENCY INDICATORS
INDICATORS 018 01. Demonstrate skills in the use of haircutting implements. 02. Demonstrate sectioning techniques for a haircut.	018 Identify haircutting and shaping implements, describe various types of hair cuts and demonstrate the ability to give a haircut and shaping. SKILLS: Describe - machines properties matter spacial relationships List - machines Identify - compound machine Demonstrate - laboratory instruments scientific method Give - properties	ELEMENTARY SCIENCE/MANIPULATIVE SKILLS Grades K-12 1.01 Demonstrate the proper use of a laboratroy instument appropriate for the student's grade level or course 2.01 Demonstrate proper care of laboratory instruments when using and storing them 3.01 Construct simple equipment, models, and exhibits using materials and supplies appropriate for the student's grade level or course ELEMENTARY SCIENCE Grades 4-6 (Matter and Energy) 3.01 Describe properties such as color, shape, weight, and texture of given objects 28.02 List several simple machines such as the lever and inclined plane 28.03 Describe how some simple machines are used in everyday life 28.04 Identify a compound machine as two or more machines working together ELEMENTARY SCIENCE/ATTITUDES Grades 4-6 5.01 Make interpretations of observations and data obtained from experiments 5.02 Demonstrate critical thinking and the use of scientific inquiry when given a scientific problem

VOCATIONAL EDUCATION COURSE Cosmetology

018 REFER TO REFERENCES: PCP: Unit XII Section B
Pages 517-610 B

- Kibbe, Constance V. Standard TextBook of Cosmetology
  Bronx, NY: Milady Publishing Corp., 1981
- Dalton, John W. The Professional Cosmetologist
  St. Paul, Minn: West Publishing Co., 1976
- Barrett, Dean. The Van Dean Manual: Professional Techniques for Cosmetologist
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- Scott, Olive P. et AL. The Prentice-Hall Textbook of Cosmetology: A Professional Guide to the Theory and Practice of Beauty Culture. Englewood Cliffs, NJ: Prentice-Hall Inc., 1976
- Sasson, Vidal Super Cuts: Using the New Thermal Styling Techniques
  Vidal Sasson Holdings, Ltd. 1972
- Thorpe, S. C. Practice and Science of Standard Barbering
  Bronx, NY: Milady Pub. Corp., 1968

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VOCATIONAL EDUCATION COURSE Cosmetology

VOCATIONAL EDUCATION PERFORMANCE INDICATOR	VOCATIONAL EDUCATIONAL COMPETENCY SCIENCE SKILL/CONCEPT	RELEVANT SCIENCE COMPETENCY INDICATORS
INDICATORS 019 01. Demonstrate knowledge of wig fibers. 02. Demonstrate knowledge of wig cleaning chemicals. 03. Demonstrate knowledge and skill in styling.	019 Identify fibers and construction used in wiggery and demonstrate skills in styling and cleaning wiggery. SKILLS: Identify - cells parts functions organs Explain - density specific gravity Describe - properties matter fibers polymers processes List - biochemistry compound	LIFE SCIENCE Grade 7 (The Organization of Living Things) 2.01 Identify cells in a variety of organisms--plants and animals--when given pictures, microscope slides, other visuals, and/or living materials 2.02 Identify components of cells such as nucleus, cytoplasm, cell memebrane, and cell wall and explain their function when given slides, pictures, other visuals, and/or living materials PHYSICAL SCIENCE Grades 10-12 (Organic Chemistry) 5.01 Describe how fibers can be made through the process of polymerization CHEMISTRY Grades 10-12 (The Science of Chemistry) 3.01 Explain the concepts of density and specific gravity after performing a density experiment with various materials 3.02 Describe the physical properties of matter such as linear dimensions, volume, weight, mass, freezing point, boiling point, malleability, shape, etc., through observation and experimentation (Aspects of Biochemistry) 1.01 List groups of simple biochemical compounds such as fats, proteins, and carbohydrates 1.02 Describe major biochemical reactions which occur in living things such as digestion and cellular metabolism

SELECTED TEACHER HELPS

VOCATIONAL EDUCATION COURSE Cosmetology

019 REFER TO REFERENCES: PCP: Section B Unit XIII
Pages 615-624
Pages 629-635
Pages 637-643

- Franco SyliviaI.; Moore, Adella M.; Oakley, Gary D. The World of Cosmetology NY: McGraw-Hill Book Co. 1980
- Kibbe, Constance V. Standard Textbook of Cosmetology Bronx, NY: Milady Publishing Corp., 1981
- Dalton, John W. The Professional Cosmetologist St. Paul, Minn: West Publishing Co., 1976
- Barrett, Dean. The Van Dean Manual: Professional Techniques for Cosmetologist Rev. Ed., Bronx, NY: Milady Publishing Corp., 1974
- Scott, Olive P. et AL. The Prentice-Hall Textbook of Cosmetology: A Professional Guide to the Theory and Practice of Beauty Culture. Englewood Cliffs, NJ: Prentice-Hall Inc., 1976

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VOCATIONAL EDUCATION PERFORMANCE INDICATOR	VOCATIONAL EDUCATIONAL COMPETENCY SCIENCE SKILL/CONCEPT	RELEVANT SCIENCE COMPETENCY INDICATORS
INDICATORS 020 01. Demonstrate knowledge of history of permanent waving. 02. Demonstrate knowledge of chemistry of permanent waving. 03. Demonstrate knowledge and skills of permanent waving methods. 04. Demonstrate knowledge and skill of permanent waving procedures.	020 Identify permanent wave products and implements, analyze hair and demonstrate ability to give a permanent wave. SKILLS: Demonstrate - laboratory instruments	**ELEMENTARY SCIENCE/MANIPULATIVE SKILLS** Grades K-12 1.01 Demonstrate the proper use of a laboratory instrument appropriate for the student's grade level or course **BIOLOGY** Grades 10-12 (The Nature of Life) 4.01 Identify the basic unit (cell) of which living things are composed 4.02 List common structures found in all cells 4.03 Explain that cells vary in size, structure, and function 1.02 Measure liquid volumes, within the precision of each container, using flasks, cylinders, and beakers 1.04 Choose appropriate units for measuring area, length, volume, mass, weight, temperature, heat and time (Chemical Reactions) 3.01 Demonstrate and explain the effect that changes in temperature, concentration, and pressure have on the extent and direction of a chemical reaction (Acids, Bases, and Salts) 2.01 Write a chemical formula for each of a variety of simple acids, bases, and salts 2.02 Identify the formulas of simple acids, bases, and salts, each by name 3.01 Determine experimentally the pH, the effect on litmus paper, and other physical characteristics

VOCATIONAL EDUCATION COURSE Cosmetology

020 REFER TO REFERENCES: CPC: Unit XIV Section B
Pages 653-666
Pages 675-712

- Powitt, A. H. Hair Structure and Chemistry Simplified, Bronx, NY Milady 1972
- The Anatomy of a Permenant Wave Jhirmack Enterprises Inc., Redding, Calif.
- Franco SyliviaI.; Moore, Adella M.; Oakley, Gary D. The World of Cosmetology NY: McGraw-Hill Book Co. 1980
- Kibbe, Constance V. Standard Textbook of Cosmetology Bronx, NY: Milady Publishing Corp., 1981
- Dalton, John W. The Professional Cosmetologist St. Paul, Minn: West Publishing Co., 1976
- Barrett, Dean. The Van Dean Manual: Professional Techniques for Cosmetologist Rev. Ed., Bronx, NY: Milady Publishing Corp., 1974
- Scott, Olive P. et Al. The Prentice-Hall Textbook of Cosmetology: A Professional Guide to the Theory and Practice of Beauty Culture. Englewood Cliffs, NJ: Prentice-Hall Inc., 1976

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VOCATIONAL EDUCATION COURSE Cosmetology

VOCATIONAL EDUCATION PERFORMANCE INDICATOR	VOCATIONAL EDUCATIONAL COMPETENCY SCIENCE SKILL/CONCEPT	RELEVANT SCIENCE COMPETENCY INDICATORS
INDICATORS 021 01. Demonstrate knowledge and chemistry of hair relaxers. 02. Demonstrate safety procedures. 03. Demonstrate the ability to give a chemicalwaxing treatment.	021 Identify chemcial hair relaxing products, analyze hair and demonstrate ability to give a chemical relaxer. SKILLS: Demonstrate - lab instruments	**ELEMENTARY SCIENCE/MANIPULATIVE SKILLS** Grades K-12 1.01 Demonstrate the proper use of a laboratory instrument appropriate for the student's grade level or course **BIOLOGY** Grades 10-12 (The Nature of Life) 4.01 Identify the basic unit (cell) of which living things are composed 4.02 List common structures found in all cells 4.03 Explain that cells vary in size, structure, and function 1.02 Measure liquid volumes, within the precision of each container, using flasks, cylinders, and beakers 1.04 Choose appropriate units for measuring area, length, volume, mass, weight, temperature, heat and time (Chemical Reactions) 3.01 Demonstrate and explain the effect that changes in temperature, concentration, and pressure have on the extent and direction of a chemical reaction (Acids, Bases, and Salts) 2.01 Write a chemical formula for each of a variety of simple acids, bases, and salts 2.02 Identify the formulas of simple acids, bases, and salts, each by name 3.01 Determine experimentally the pH, the effect on litmus paper, and other physical characteristics

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021 REFER TO REFERENCES: PCP: Unit XV Section B
Pages 751-758
Pages 721-730 & 733
Pages 745-749

- Morrow, Willis L. Curly Hair
U.S.A. Black Publishers of San Diego, 1973
- Powitt, A. H. Hair Structure and Chemistry Simplified,
Bronx, NY Milady 1972
- Franco SyliviaI.; Moore, Adella M.; Oakley, Gary D. The World of Cosmetology
NY: McGraw-Hill Book Co. 1980
- Kibbe, Constance V. Standard Textbook of Cosmetology
Bronx, NY: Milady Publishing Corp., 1981
- Dalton, John W. The Professional Cosmetologist
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- Barrett, Dean. The Van Dean Manual: Professional Techniques for Cosmetologist
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of Beauty Culture. Englewood Cliffs, NJ: Prentice-Hall Inc., 1976

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CURRICULUM ALIGNMENT CHART

VOCATIONAL EDUCATION COURSE Cosmetology

VOCATIONAL EDUCATION PERFORMANCE INDICATOR	VOCATIONAL EDUCATIONAL COMPETENCY SCIENCE SKILL/CONCEPT	RELEVANT SCIENCE COMPETENCY INDICATORS
INDICATORS		
022 01. Demonstrate skills in use of hair coloring and lightening products. 02. Demonstrate safety procedures in hair coloring and lightening.	022 Identify products for coloring, lightening, conditioning tint-backs, lash and brow tints and demonstrate ability to color hair by temporary, semipermanent and permanent methods. SKILLS: Demonstrate - lab instruments	ELEMENTARY SCIENCE/MANIPULATIVE SKILLS Grades K-12 1.01 Demonstrate the proper use of a laboratory instrument appropriate for the student's grade level or course BIOLOGY Grades 10-12 (The Nature of Life) 4.01 Identify the basic unit (cell) of which living things are composed 4.02 List common structures found in all cells 4.03 Explain that cells vary in size, structure, and function 1.02 Measure liquid volumes, within the precision of each container, using flasks, cylinders, and beakers 1.04 Choose appropriate units for measuring area, length, volume, mass, weight, temperature, heat and time (Chemical Reactions) 3.01 Demonstrate and explain the effect that changes in temperature, concentration, and pressure have on the extent and direction of a chemical reaction (Acids, Bases, and Salts) 2.01 Write a chemical formula for each of a variety of simple acids, bases, and salts 2.02 Identify the formulas of simple acids, bases, and salts, each by name 3.01 Determine experimentally the pH, the effect on litmus paper, and other physical characteristics

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022 REFER TO REFERENCES: CPC: Unit XVI Section B
Pages 767-780
Pages 785-818

Unit XVII Section B
Pages 827-840
Pages 847-876

- Franco Sylvial.; Moore, Adella M.; Oakley, Gary D. The World of Cosmetology
NY: McGraw-Hill Book Co. 1980

- Kibbe, Constance V. Standard Textbook of Cosmetology
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VOCATIONAL EDUCATION COURSE Cosmetology

VOCATIONAL EDUCATION PERFORMANCE INDICATOR	VOCATIONAL EDUCATIONAL COMPETENCY SCIENCE SKILL/CONCEPT	RELEVANT SCIENCE COMPETENCY INDICATORS
INDICATORS 023 01. Identify nail structure. 02. Identify nail disorders. 03. Demonstrate manicuring and pedicuring procedures.	023 Identify nail diseases and disorders and demonstrate the ability to give a manicure and pedicure using proper tools and supplies. SKILLS: Identify - body parts human body systems foods food groups cells parts function organs Discriminate - health safety Describe - disease organisms humans spacial relationships List - machines Identify - compound machines diseases viruses bacteria Examine - tissues Construct - models Demonstrate - lab instruments Label - viruses Explain - fungi people	**ELEMENTARY SCIENCE** Grades 4-6 (Living Things) 2.01 Identify the function of major body parts 6.01 Discriminate between good and bad health practices 6.02 Describe how disease-causing organisms enter the body such as entry through water, food, air, and skin **ELEMENTARY SCIENCE/MANIPULATIVE SKILLS** Grades K-12 2.01 Demonstrate proper care of laboratory instruments when using and storing them **LIFE SCIENCE** Grades 10-12 (Microbiology) 1.01 Label the major components of a virus and explain how the components function 1.02 Classify different types of bacteria shape 1.03 Identify from a list familiar diseases those caused by viruses or bacteria 3.03 Explain that fungi are both helpful and harmful to people when given examples of how fungi affect people's lives

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023 REFER TO REFERENCES: CPC: Section C Unit I
Pages 5-14
Pages 27-77
Pages 79-90

CPC: Section C Unit II
Pages 99-102
Pages 111-114

CPC: Section C Unit III
Pages 121-123
Pages 131-133

- Franco Sylvia I.; Moore, Adella M.; Oakley, Gary D. The World of Cosmetology NY: McGraw-Hill Book Co. 1980
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VOCATIONAL EDUCATION COURSE Cosmetology

VOCATIONAL EDUCATION PERFORMANCE INDICATOR	VOCATIONAL EDUCATIONAL COMPETENCY SCIENCE SKILL/CONCEPT	RELEVANT SCIENCE COMPETENCY INDICATORS
INDICATORS 024 01. Identify facial treatments and demonstrate tha ability to give a facial. 02. Demonstrate proper skills for facial procedures. 03. Demonstrate knowledge of makeup and skill in its application 04. Demonstrate skill in removal of superfluous hair.	024 Identify facial treatments and demonstrate the ability to give a facial. SKILLS: Identify - cells parts functions drugs acids bases salts List - drugs alcohol narcotics tobacco Diagram - cells Discuss - diseases Plan - experiments scientific method Measure - mass precision Write - scientific notation symbols elements formulas compounds	LIFE SCIENCE Grade 7 2.02 Identify components of cells such as nucleus, cytoplasm, cell membrane, and cell wall and explain their function when given slides, pictures, other visuals, and/or living materials BIOLOGY Grades 10-12 (The Nature of Life) 4.02 List common structures found in all cellls 4.03 Explain that cells vary in size, structure, and function (Biology of Humans) 3.03 Discuss the effects of diseases (nutritional, pathogenic, genetic) upon the physiology of the human body CHEMISTRY Grades 10-12 (Measuring and Computing) 1.02 Measure liquid volumes, within the precision of each container, using flasks, cylinders, and beakers 1.04 Choose appropriate units for measuring area, length, volume, mass, weight, temperature, heat, and time (Atomic Theory) 5.04 Write balanced equations for common composition, decomposition, replacement, and ionic chemical reactions by using formulas for all reactants and products (Chemical Reactions) 3.01 Demonstrate and explain the effect that changes in temperature, concentration, and pressure have on the extent and direction of a chemical reaction

VOCATIONAL EDUCATION COURSE Cosmetology

024 REFER TO REFERENCES: CPC: Section C Unit IV
Pages 141-152
Pages 167-189
Pages 191-202

CPC: Section C Unit V
Pages 215-245
Pages 261-284
Pages 285-297

CPC: Section C Unit VI
Pages 309-311
Pages 321-334

- Traynor, Mark Mark Traynor's Guide to Professional Make-up Techniques. Mark Traynor, Inc. 1974
- Franco Sylivial.; Moore, Adella M.; Oakley, Gary D. The World of Cosmetology NY: McGraw-Hill Book Co. 1980
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